<u>3/17/2008</u>, 10/849,291 Deleted: 3/3/2008 Au 30 7440-57-5 24 7440-22-4 Aq V 12 7440-62-2 10 7440-50-8 Cu 8 7440-06-4 Pt. 7  $7\,4\,4\,0\,{-}\,7\,4\,{-}\,6$ In 3 7439-96-5 Mn Νi 3 7440-02-0 7440-69-9 Βi C22C009-00 TC 56-9 (Nonferrous Metals and Alloys) Section cross-reference(s): 57 IT 60411-57-6 RL: USES (Uses) (metalization with, of cubic boron nitride) L36 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN 1976:78308 HCAPLUS Full-text ACCESSION NUMBER: DOCUMENT NUMBER: 84:78308 ORIGINAL REFERENCE NO.: 84:12829a,12832a TITLE: Platinum alloy Savitskii, E. M.; Polyakova, V. P.; Gorina, N. INVENTOR(S): B.; Voronova, L. I. Baikov, A. A., Institute of Metallurgy, USSR PATENT ASSIGNEE(S): U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1975, 52(35), 75. SOURCE: CODEN: URXXAF DOCUMENT TYPE: Patent LANGUAGE: Russian FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. |   | DATE         |
|------------------------|------|----------|-----------------|---|--------------|
| SU 485165              | A1   | 19750925 | SU 1974-2019612 |   | 197404       |
| PRIORITY APPLN. INFO.: |      |          | SU 1974-2019612 | Α | 26<br>197404 |

AB Addition of In or Al to a Pt alloy increases hardness and extends the color range. The Pt alloy contains In or Al 40.0-65.0, Pb 0.5-1.0, and Fe 0.2-0.8 weight%.

IT 58385-17-4

RL: USES (Uses)

(coloring and hardening of)

RN 58385-17-4 HCAPLUS

CN Indium alloy, base, In 40-65,Pt 33-59,Pb 0.5-1,Fe 0.2-0.8 (9CI) (CA INDEX NAME)

| Component | Comp | on      | ent | Component       |
|-----------|------|---------|-----|-----------------|
|           | Per  | Percent |     | Registry Number |
| +         |      |         |     | +=========      |
| In        | 40   | _       | 65  | 7440-74-6       |
| Pt        | 33   | _       | 59  | 7440-06-4       |
| Pb        | 0.5  | _       | 1   | 7439-92-1       |
| Fe        | 0.2  | _       | 0.8 | 7439-89-6       |

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C22C

CC 56-2 (Nonferrous Metals and Alloys)

58385-16-3 58385-17-4

RL: USES (Uses)

(coloring and hardening of)

L36 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2008 ACS on STN ACCESSION NUMBER: 1972:465564 HCAPLUS Full-text

DOCUMENT NUMBER: 77:65564

ORIGINAL REFERENCE NO.: 77:10811a,10814a

Gold-base alloys for use in dentistry and TITLE:

industry

INVENTOR(S): Burnett, Arthur Peter

PATENT ASSIGNEE(S): Ney, J. M., Co. SOURCE: U.S., 2 pp. CODEN: USXXAM

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. |   | DATE         |
|------------------------|------|----------|-----------------|---|--------------|
|                        |      |          |                 |   |              |
| US 3666540             | А    | 19720530 | US 1967-656048  |   | 196707<br>26 |
| PRIORITY APPLN. INFO.: |      |          | US 1967-656048  | A | 196707       |

AB A Au alloy of good corrosion resistance, high solidus temperature, satisfactory hardness, and good casting properties is provided for dental purposes. The alloy contains Au 78-85, Pd 8-13, Pt 4-8, Fe 0.7-1.0, Sn 0.9-1.4, and Re 0.07-0.2%. The addition of Re provides grain refining, while the addition of Ag (up to 2), Zn (up to 1.5% and In (up to 1%) promotes fluidity. The hardness of the alloy can be developed by air-cooling from >980° to 100-150° at a rate of 80-130°/min. Age hardening of the alloy is done at 530-45°for 15-30 min and for optimum results the Fe:Pt ratio should be kept at 0.4-0.6:1. Thus, a cast Au alloy having a solidus temperature of 1173° and a thermal linear expansion coefficient of 1.4 + 10-5 degree-1 was made by casting an alloy composition containing Au 81.0, Pd 8.3, Pt 2.2, Fe 0.6, Sn 2.2, and Re 0.1% in a phosphate bonded investment mold. The alloy was aircooled from 926°. After age hardening the ultimate tensile strength of the alloy was 90,000 psi. 37200-84-3

IT

RN

RL: USES (Uses)

(for dentistry) 37200-84-3 HCAPLUS

Gold alloy, base, Au 78-85,Pd 8-13,Pt 4-8,Ag 0-2,Zn 0-1.5,Sn 0.9-1.4, Fe 0.7-1, In 0-1, Re 0.1-0.2 (9CI) (CA INDEX NAME)

| Component | Coi   | Component |    | Component |        |  |
|-----------|-------|-----------|----|-----------|--------|--|
|           | P     | Percent   |    | Registry  | Number |  |
|           | +==== |           |    | -+        |        |  |
| Au        | 78    | _         | 85 | 7440      | )-57-5 |  |
| Pd        | 8     | _         | 13 | 7440      | 0-05-3 |  |
| Pt        | 4     | _         | 8  | 7440      | 0-06-4 |  |
| Aq        | 0     | _         | 2  | 7440      | -22-4  |  |